

Health
Chapter
Policy
Research for
the City of
Eau Claire



**Eau Claire Health Chapter
Comprehensive Plan**

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Introduction

The City of Eau Claire is developing a new Comprehensive Plan chapter related to the promotion of human health in the built environment. Including sidewalks, bike trails, parks and community gardens in a city are common examples of how the built environment can play a positive role in helping to reduce risk factors which may lead to health problems. After conducting two public meetings, many issues related to the built environment have been gathered. Eau Claire city staff requested assistance researching possible policy/programs that could be considered for future implementation. This report is a response to this request and provides examples of policies and programs around the country that have been implemented to address the health related issues the City of Eau Claire is interested in addressing.

Chapter 1: Crime and Safety

Many communities now employ the use of CPTED (Crime Prevention Through Environmental Design) to reduce crime in their communities. Below are some examples of the use of CPTED.

Comprehensive Plans

Baltimore County, Maryland¹

- Community Services Element. Action 11 – Review all development and design plans of county facilities to ensure use of Crime Prevention Through Environmental Design (CPTED), as adopted in the Comprehensive Manual of Development Policies (CMDP). (p110)

North Miami, Florida²

- Future Land Use Element; Community Redevelopment Policy 1.5.9: The City should encourage the use of Crime Prevention Through Environmental Design (CPTED) standards in the redevelopment of the City, enhancing the safety of the City and limiting design factors which abet crime. (p1-8)

Ordinances and Regulations

Tampa, FL

- Westshore Overlay District Development Standards. The Overlay Zoning District furthers the principles of "Crime Prevention Through Environmental Design (CPTED) through incorporation of the principles of Natural Surveillance, Natural access Control, and Territorial Reinforcement.³

Additional Resources

- ***City of Virginia Beach***
 - Design Guidelines for CPTED⁴
- ***City of Palmdale, CA***
 - CPTED Site Plan Review⁵
- ***Virginia Crime Prevention Association***
 - CPTED Guidelines⁶

Chapter 2: Food Access

As research continues to come out demonstrating how the built environment affects access to healthy foods, which in turn, are a huge determinant of health outcomes, the issue of access to healthy foods has become extremely common discourse in planning and public health arenas. Many communities have incorporated language into their comprehensive plans to implement strategies to increase access to healthy foods.

Comprehensive Plans

Alachua County, FL⁷

- Community Health Element (p422-424)
- Policy 1.2.4 – Increase access to health-promoting foods and beverages in the community. Form partnerships with organizations or worksites, such as health care facilities and schools, to encourage healthy foods and beverages.
 - Objective 1.3 – Promote a healthy community by providing for obesity prevention and prevention of other chronic illnesses.
 - Policy 1.3.1 Alachua County shall promote access to healthful, affordable, and nutritious food.
 - Policy 1.3.1.1 Promote food security and public health by encouraging locally-based food production, distribution, and choice in accordance with the Future Land Use Element.
 - Policy 1.3.1.2 Alachua County shall consider programs to encourage property owners to make use of vacant properties as community gardens
 - Policy 1.3.1.3 Continue to offer support for home and community gardening through programs offered by USDA Farm to School Programs and the Alachua County Extension Office and target low-income and populations for health disparity for programs promoting gardening, healthy food access and nutrition improvement.
 - Policy 1.3.1.4 Alachua County shall discourage the sale of less healthy foods and beverages as defined by Institute of Medicine within local government facilities including recreational areas.
 - Policy 1.3.2 Alachua County shall partner with local organizations and develop standards to promote community food systems.

Philadelphia, PA⁸

- Target 10: Bring local food within 10 minutes of 75 percent of residents. (p44)

Oneida Nation, WI⁹

- Goal 6: Establish a “Food Security Program” that reduces hunger, food insecurity and enables the tribe to provide foods for all persons in the Oneida Community at all times.
 - Objective–6.7 Undertake community “Capacity Building” to strengthen the community’s ability to be self-sufficient and provide local food security.
- Goal 8: Provide technical assistance and training to tribal citizens so they can be self-sufficient in food growing, processing and storage.
 - Objectives–8.1 Emphasize building individuals capacity/capabilities to provide their own food needs rather than encouraging dependence on outside sources
- Goal 9: Produce food that is healthy for the people.
 - Objective–9.1 Plant, grow, and harvest healthy food crops for the Oneida People. (p2-30 – 2-32)

Ordinances and Regulations

Minneapolis, MN

- The City Council passed an ordinance in 2008 that requires corner stores to sell five varieties of perishable produce. The health department expanded the regulation in 2009 to require that stores that are certified by the Women, Infants and Children program (WIC), a federal program that gives those underprivileged populations support to purchase food to carry seven varieties and 30 pound of fresh produce.¹⁰

San Luis Obispo, CA

- 1982, approved an ordinance forbidding the construction of “drive-through” businesses¹¹

Seattle, WA

- The Seattle City Council and Mayor approved an ambitious urban farm and community garden piece of legislation to improve access to locally grown food. The ordinance took effect Sept. 23, 2010. ¹²

Additional Resources

The following information was taken from The American Planning Association’s *Policy Guide on Community and Regional Food Planning*.¹³

General Policy #1: The American Planning Association, its Chapters and Divisions, and planners support a comprehensive food planning process at the community and at regional levels.

Specific Policy #1A. Planners support the creation of local and regional food planning mechanisms that integrate major local planning functions (such as land use, economic

development, transportation, environment, parks and recreation, public safety, health and human services, and agricultural preservation).

Planners could play the following roles:

1. Advocate for, and build support in communities and regions for a more comprehensive approach to food planning, such as through local and/or regional food policy councils or coalitions.
2. Undertake periodic assessments of community/regional food issues, including broad community participation, and develop recommendations for actions.
3. Integrate recommendations emerging from community and regional food planning into comprehensive plans and supporting ordinances, strategic plans, economic development plans, environmental plans, neighborhood or area plans, and plans for specific agencies such as transportation and parks and recreation.
4. Assist nonprofit agencies and public-private-nonprofit partnerships engaged in anti-hunger, nutrition, and agriculture activities by sharing data for planning, implementing, and evaluating programs.

Specific Policy #1B. Planners support the development of plans for building local food reserves and related activities to prepare for emergencies.

Planners could play the following roles:

1. Assist in assessing the community and region's potential food needs during emergencies of different kinds (such as a major earthquake, hurricane, terrorist attack, or the spread of contagious disease) and the capacity of current food sources and distribution systems in the community and region.
2. Partner with appropriate public agency and private stakeholder groups to develop appropriate plans to build sufficient local and regional food reserves for emergencies, including related communications, logistics, and transportation infrastructure, and to restore food system integrity and operation after the emergency.
3. Coordinate with other agencies in the implementation of public outreach and education campaigns to inform the community about food related emergency preparedness.

General Policy #2: The American Planning Association, its Chapters and Divisions, and planners support strengthening the local and regional economy by promoting community and regional food systems.

Specific Policy #2A. Planners support integrating food system elements into urban, rural, and regional economic development plans.

Planners could play the following roles:

1. Support preparation of area-wide economic development plans that incorporate food production, processing, wholesale, retail, and waste management activities as well as

consideration of the impacts these activities have on the local and regional economy in terms of jobs, tax and sales revenues, and multiplier effects.

2. Support efforts to raise public awareness of the importance of the food sector to the local and regional economy.

Specific Policy #2B. Planners support developing land use planning policies, economic development programs, land taxation, and development regulations to enhance the viability of agriculture in the region (as identified in the APA Agricultural Land Preservation Policy Guide).

Planners could play the following roles:

1. Conduct assessments of prime agricultural lands that will be affected by current and projected development trends.
2. Analyze factors that support or constrain the viability of agriculture in the region such as high property taxes, access to markets, high cost of capital, and land use regulations that restrict farmers' ability to earn additional income through agri-tourism or farm stands. Special attention in this category may be given to "agriculture of the middle," i.e. farms that fall in between local and commodity markets.
3. Develop or modify policies, regulations, and other tools such as agricultural land preservation zoning, purchase of development rights, transfer of development rights, and partnerships with land trusts, to protect prime agricultural land.
4. Partner with organizations that promote better understanding of farm life for urban dwellers to reduce the urban/rural divide.

Specific Policy #2C. Planners support developing appropriate land use, economic development, transportation and comprehensive planning policies and regulations to promote local and regional markets for foods produced in the region.

Planners could play the following roles:

1. Develop land use and transportation plans, modify development regulations, and help prepare economic incentive programs to provide accessible and well-served sites and other development assistance for year round public markets, farmers' markets, small-scale processing facilities, and distribution centers for foods produced in the region.
2. Prepare comprehensive and neighborhood plans that recognize community gardens and other forms of urban agriculture, farm/garden stands, and farmers' markets as desirable civic uses in neighborhoods, and provide sufficient space, infrastructure, and inter-modal transportation access for such uses. Ensure that zoning barriers to these activities are addressed or removed.
3. Through plans, state and federal agricultural policies and funding, and development regulations, support food production for local consumption, direct marketing by farmers, agri-food tourism, and niche marketing of specialized agricultural products such as wines, cheeses, and cherries.

4. Assemble and implement business enhancement and related incentives to help public institutions such as schools, hospitals, colleges, and government agencies, and private food outlets such as grocery stores and restaurants source foods produced in the region.

Specific Policy #2D. Planners support developing food system inventories, economic and market analyses, and evaluation techniques to better understand the economic impact and future potential of local and regional agriculture, food processing, food wholesaling, food retailing and food waste management activities.

Planners could play the following roles:

1. Support studies that consider the impact on the area-wide economy of locally oriented food production and distribution activities such as farmer's markets, food co-operatives, community supported agriculture farms, local food processing facilities, community gardens, public markets, niche farming enterprises, and other locally sourced food businesses.
2. Undertake studies assessing trends in farm consolidation, including underlying factors, to inform plans to support "agriculture of the middle."
3. Contribute to the preparation of regional food resource guides that identify organizations and businesses that are involved in local and regional food production, processing, and retailing, the better to educate the public and build links between local producers and local consumers.

Specific Policy #2E. Planners support initiatives in marketing, technical, and business development assistance for small-scale and women and minority-owned farm, food-processing and food retail enterprises.

Planners could play the following roles:

1. Collaborate with agricultural and related agencies and other organizations that provide training, technical assistance, and capital to small-scale businesses and businesses owned by women and minorities engaged in farming, food processing, and food retailing operations.
2. Assist efforts to help regional farmers diversify their products, and produce and market organic and other high-value products desired by consumers.
3. Support the development of community kitchens and related infrastructure, food business incubator facilities, and entrepreneurial urban agriculture projects.

General Policy #3: The American Planning Association, its Chapters and Divisions, and planners support food systems that improve the health of the region's residents.

Specific Policy #3A. Planners support and help develop policies, plans, and regulations in land use, transportation, economic development, and urban design so as to increase access to food sources that offer affordable and culturally appropriate healthful foods. especially for low income households in urban and rural areas.

Planners could play the following roles:

1. Encourage mixed-use neighborhood design and redevelopment to include small and mid-size grocery stores (e.g., 3,000 to 20,000 square feet), seasonal farmers markets, community-based and government nutrition programs, and open space and related infrastructure for community vegetable gardens to allow residents to grow their own food.
2. Develop area plans and design schemes in ways that encourage safe and convenient pedestrian, bike, transit connections between neighborhoods and the food sources described above.
3. Support transit programs that improve connections between low-mobility neighborhoods on the one hand, and supermarkets, community gardens, food assistance programs such as food pantries and soup kitchens, and health and social service providers on the other, with a view to reducing travel time and enhancing safe and convenient use.
4. On publicly owned lands, such as schoolyards, parks and greenways, and tax-foreclosed properties, support the development of vegetable gardens, edible landscaping, and related infrastructure, and the formation of partnerships with community-based nonprofits serving low-income residents for garden related programs.

Specific Policy #3B. Planners develop and support policies, plans, and regulations in land use, transportation, economic development, and urban design to encourage the availability of healthy types of foods associated with reduced risk of or occurrence of obesity and poor nutrition leading to diet-related diseases like diabetes and heart disease (especially in and near schools and other predominantly youth-centered environments.)

Planners could play the following roles

1. Assess and map the availability of fast food restaurants in low income neighborhoods relative to the availability of grocery stores offering healthier food options.
2. Explore the feasibility of zoning changes to limit the development of fast food outlets within a specified radius of schools (say, one-half mile) and other youth-centered facilities such as the local YMCA and YWCA and boys and girls clubs.
3. Explore the possible use of sign controls to prevent billboards that market low nutrient/high calorie foods fast foods and other negative food marketing within a specified radius of schools and other youth-centered facilities.

Specific Policy #3C. Planners support, through appropriate land use and zoning, transportation, urban design, and research tools, community-based organizations that develop demand for healthful foods, especially in low-income communities.

Planners could play the following roles:

1. Undertake neighborhood studies related to the siting of health and social service facilities (that may offer food stamps and other nutrition programs) near retail grocery outlets offering nutritious foods.

2. Support the development of temporary farm stands, urban agriculture projects, and community vegetable gardens on school, park, and community center sites, and near public agency offices and nonprofit providers offering health, human and social services.
3. Promote the provision of community gardens, urban agriculture projects, and community kitchens in multifamily and low-income housing projects.
4. Assist programs that encourage youth to consume healthy foods that they are involved in producing, such as through edible schoolyards, after school gardening and snack programs, and food preparation classes.
5. Assemble and implement business-enhancement incentives to encourage partnerships between convenience stores and neighborhood-based nonprofits that encourage stores to offer healthful foods on the one hand, and educate the community to adopt healthy diets, on the other.

Planners support, through land use decisions, environmental monitoring, ecological mitigation, and policies related to working conditions of farm and food workers, food safety practices that ensure consumer health.

Planners could play the following roles:

1. Support land use decisions, environmental monitoring, and ecological mitigation that prevents potential contamination of agriculture and food products through water runoffs from animal operations, provides sanitary living and working conditions for farm and food workers, and otherwise promotes food safety. In supporting these decisions, additional barriers and costs that potentially may be imposed on especially small and limited resource farmers and ranchers may need to be considered and addressed.
2. Support agricultural and food practices that affirmatively and proactively address worker health and safety in ways that also advance food safety.
3. Assess the possible food safety implications of older buildings housing food markets, grocery stores, and food processing operations, with a view to supporting goals related to food safety and business viability, and consider providing incentives to businesses to enhance food safety.

General Policy #4: The American Planning Association, its Chapters and Divisions, and planners support food systems that are ecologically sustainable.

Specific Policy #4A. Planners support the creation of community and regional food systems linking production, processing, distribution, consumption, and waste management to facilitate, to the extent possible, reliance on a region's resources to meet local food needs.

Planners could play the following roles:

1. Encourage conservation of regional agricultural land, open space, and wilderness resources for agriculture and food systems (as identified in the APA Agricultural Land Preservation Policy Guide).

2. Support the creation of marketing networks to bring together farmers, processors, and purchasers of locally grown and produced foods.
3. Support, as relevant with the use of planning tools, the integration in food production and distribution of sustainability principles and practices, which promote clean air, water, healthy soils, and healthy habitats and ecosystems.
4. Provide incentives and special zoning provisions to integrate locally supported agriculture (e.g., community gardens, urban agriculture, small farms) into existing settlements and new areas of residential development.

Specific Policy #4B. Planners support food system activities that minimize energy use and waste, and encourage the use of local and renewable energy resources.

Planners could play the following roles:

1. Develop regional plans and policies that strengthen markets for the region's food producers so as to reduce long-distance transportation of agricultural products and processed foods.
2. Assist in conducting energy audits to assess amounts and sources of energy used in the region for the production, distribution, and consumption of food. This inventory can identify existing uses of local and sustainable energy resources as well as the potential for expansion in this area.
3. Support as relevant with planning tools, efforts to assess the capacity of regional agriculture for meeting potential energy demands versus regional food needs.
4. Assess the impact of food waste disposal on area landfills and explore possibilities related to recycling food wastes through composting and bio-fuel development.

Specific Policy #4C. Planners support efforts to assess and mitigate the negative environmental and ecological effects caused by and affecting food system activities.

Planners could play the following roles:

1. In collaboration with other professionals, explore pathways through which the food system impacts the region's natural environment, fisheries and other wildlife habitats, and ecology, and the impacts of pollution on food systems. This analysis can inform plans to sustain ecologies including those upon which our food system depends, and to minimize harm to them.
2. Assist in assessing the sources of lake and river pollution and eutrophication, and considering ways to reduce such pollution.
3. Assist in assessing solid waste streams at different points of the community's food system (production, wholesale, retail, consumer, etc.) and considering ways to reduce, reuse, and recycle wastes.
4. Support efforts to reduce and mitigate negative air quality impacts in food system activities, including those contributed by farm activities and the long-distance transportation of food from farm to fork.

5. Support strategies to increase the adoption of water and soil conservation practices in agriculture.

General Policy #5: The American Planning Association, its Chapters and Divisions, and planners support food systems that are socially equitable and just.

Specific Policy #5A. Planners employ land use, transportation, and other planning tools to increase spatial access to programs and facilities that help reduce hunger and food insecurity for residents in impoverished urban and rural communities.

Planners could play the following roles:

1. Provide data and mapping support to community and regional food assessments, including the incidence of food insecurity and location of diverse food assets.
2. Develop plans and redevelopment proposals for food insecure areas with sites and incentives for community gardens, entrepreneurial urban agriculture projects, farmers markets, neighborhood grocery stores, and food assistance programs.
3. Investigate the use of appropriate brownfield sites in low-income areas for food production.
4. Develop transportation, community development, and other plans and policies to provide convenient and safe access for low-income households to grocery stores, community gardens, and food assistance providers.
5. Encourage business district revitalization efforts to include support for convenience store sales of fresh foods.

Specific Policy #5B. In partnership with community-based organizations, planners support the creation of programs to enhance food-related economic opportunities for low-income residents.

Planners could play the following roles:

1. Develop area-wide and neighborhood plans with appropriate sites for facilities (such as community kitchens) and spaces (such as for entrepreneurial community gardens) that support food-related entrepreneurial development for low-income households.
2. Assemble in partnership with other public agencies and community-based organizations, economic development programs and incentives for food-related enterprise development, job creation, and workforce development.

Specific Policy #5C. Planners encourage and support food production on the grounds of public agencies and institutions while providing employment to low income workers and distributing products to cafeterias and area food assistance sites.

Planners could play the following roles:

1. Develop assessments of land on institutional properties suitable for cultivation and support food production activities on these sites.

2. Explore ways in which these institutions can be linked with community-based organizations in producing food on their sites to provide job opportunities and healthy food for school cafeterias and low-income residents — e.g., programs such as "plant-a-row" that add fresh produce to food assistance provided by Second Harvest Food Banks.
3. Provide site planning, design, and other relevant assistance to these institutions to facilitate food production and distribution.

Specific Policy #5D. Planners support resolving issues of rural poverty through land use, transportation, economic development planning and appropriate regulatory measures.

Planners could play the following roles:

1. Assist the region's farm and food worker organizations in rural food and community assessment and improvement efforts.
2. Undertake assessments of possible links between farm and food workers' work conditions and planning-related decisions (e.g., distance between housing, schools, and work sites, and availability of transportation options).
3. Prepare comprehensive and rural community plans to address the spatial, social and economic needs of low-income rural residents.
4. Explore the development community policies for "fair trade" purchasing by public agencies to ensure that public expenditures in food procurement are fair and equitable to producers and communities in other countries.

General Policy #6: The American Planning Association, its Chapters and Divisions, and planners support food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities.

Specific Policy #6A. Planners support community food assessment and planning to preserve and strengthen traditional native and ethnic food cultures (e.g., fisheries in Louisiana and Alaska and desert foodscapes in New Mexico and Arizona).

Planners could play the following roles:

1. Assist and support locally based efforts by Native American and other ethnic minority communities, to identify and document community and ecological assets and cultural traditions that are tied to food production, preparation, and consumption (e.g. salmon runs, wild rice and nut-gathering, agricultural fairs, and ethnic and cultural festivals).
2. Support locally based efforts to identify challenges and needs faced by members of Native American and ethnic minority groups in consuming healthful diets.
3. Support locally based efforts to prepare action plans to build on existing assets and cultural traditions that nourish Native and ethnic minority food cultures and to mitigate challenges to them.
4. Assist efforts to develop ongoing community participation mechanisms in food assessments and related planning in First Nations and in communities with a significant Native American or other minority ethnic cultures.

Specific Policy #6B. With the participation and collaboration of communities to be served, planners support the development of plans to preserve and restore the natural environment and biodiversity in the region, to revitalize traditional and ethnic food systems that depend on the regional ecology.

Planners could play the following roles:

1. Support efforts by and within Native American and other ethnic minority communities to identify and document indigenous and ethnic food systems that have been degraded or are threatened.
2. Support local efforts to restore or protect native, indigenous, or ethnic food systems.
3. Consider the impact of proposed changes in land-use and other plans on the ability of Native American and ethnic minority communities to sustain food production systems and support the coordination of planning efforts to enhance such systems in the future.

Specific Policy #6C. Planners support integrating traditional food systems and related cultural issues into community and regional planning efforts — including comprehensive and economic development plans — and other governance activities.

Planners could play the following roles:

1. Support planning that builds on and celebrates the diverse cultural, agricultural, and dietary traditions present in the region.
2. Work with tribal governments and state agencies to address land and resource management issues so as to strengthen Native American food systems including farming, hunting, gathering and fishing and nutritious diets.
3. Work collaboratively to establish mechanisms in the region to minimize and resolve conflicts between tribal governments, other local governments, and state and federal agencies and among different minority groups in communities, so as to facilitate Native and other ethnic minority communities' efforts to sustain their food systems.¹⁴

- Model Healthy Food Zone Ordinance¹⁵
- Zoning Practice, Urban Agriculture¹⁶
- USDA's Food Desert Locator¹⁷
- UW Extension Wisconsin Food Security Mapping¹⁸
- Food Assistance Report from Eau Claire's Poverty Work Group and Hunger Prevention Coalition¹⁹

Chapter 3: Workforce Housing

Many communities are concerned with a lack of workforce housing stock and are incorporating language into their comprehensive plans to address this issue. Many resources are available on how to incorporate workforce housing into community plans.

Comprehensive Plans

Fairfax County Comprehensive Plan, 2011 Edition, Policy Plan Housing²⁰

- The Comprehensive Plan calls for 20 percent of new residences be set aside as work force or affordable housing. This goes beyond the county's current policy of 12 percent. This housing will be made available to residents making from 50 to 120 percent of the area median income.
- The Tysons Plan also recommends that new nonresidential development contribute \$3.00 per square foot to a housing trust fund dedicated to providing affordable and workforce housing opportunities in Tysons. This policy is intended to address the demand for workforce housing that is created by employment growth in Tysons.
- Concurrent with Plan adoption, the Fairfax County Zoning Ordinance was amended to create a new district called the Planned Tysons Corner Urban District or PTC District. Applications for rezoning to this district must meet the objectives of the Plan, including providing housing to various income levels.

*Guidelines for Provision of Workforce Housing*²¹

It is a policy of the Board of Supervisors of Fairfax County that Workforce Housing should be provided in the County's Mixed-Use Centers, including Tysons Corner Urban Center, Suburban Centers, Community Business Centers and Transit Station Areas, where the Area Plans envision mixed use or high-density residential development above the baseline recommendation for development. The following guidelines should apply in the development of Workforce Housing.

1. Proposals for development that are above the baseline recommendation(s) in the Area Plans should include a minimum of 12 percent of all residential units in all building construction types as affordable housing (Affordable Dwelling Units and/or Workforce Housing) as defined in the Glossary of the Fairfax County Comprehensive Plan.

For proposals that are exempt from the Affordable Dwelling Unit Program, the 12 percent policy should be met by proffered Workforce Housing. As an alternative,

the 12 percent policy may be met by any combination of proffered Affordable Dwelling Units and/or Workforce Housing units. For proposals that are not exempt from the Affordable Dwelling Unit Program, the number of Affordable Dwelling Units and the Workforce housing units combined should be equal to 12 percent of the total number of residential units in the proposed development.

Flexibility may be granted regarding the provision of Workforce Housing to the extent that consideration may be given to proposals whereby units available within the same Transit Station Area or Mixed-Use Center may be purchased by the developer of new construction and proffered as Workforce units to meet the requirements of these guidelines, as long as Guidelines 8 and 9 below are met.

1. The provision of Workforce Housing does not exempt an applicant from meeting the requirements of the Affordable Dwelling Unit Program, if applicable.
2. Workforce Housing should be subject to administrative requirements that are set forth in the Zoning Ordinance or interim guidelines generally comparable to those of the Affordable Dwelling Unit Program.
3. To encourage the provision of Workforce Housing, development proposals may realize a bonus of up to one additional market rate unit for each proffered Workforce Housing unit as long as a minimum of 12 percent of the total number of units proposed is affordable housing (i.e. Affordable Dwelling Units and/or Workforce Housing). In a mixed-use development, the bonus may be realized as non-residential square footage that is equal to the square footage of the Workforce Housing provided.

The maximum achievable bonus for the provision of Workforce Housing is 20 percent in terms of additional residential density (dwelling units per acre) or non-residential intensity (floor area ratio).

1. In accordance with guidance in the Land Use section of the Policy Plan, for developments providing affordable housing, the additional density/intensity achieved with the inclusion of applicable bonus market rate units should not be counted toward the maximum allowable density (dwelling units) or floor area ratio (FAR) designated in the Area Plan recommendation(s). Building height above the maximum designated in the Area Plan recommendation(s) should only be considered if necessary to accommodate the inclusion of bonus market rate units.
2. In all cases, a minimum of 12 percent of all residential units should be Affordable Dwelling Units and/or Workforce Housing regardless of the degree to which the density available in the Plan recommendation(s) is achieved or the bonus provisions are utilized.
3. Workforce Housing should meet the following minimum unit sizes:

- i. Efficiency: 450 square feet
 - ii. 1-bedroom: 600 square feet
 - iii. 2-bedroom: 750 square feet
4. The size (in square feet) of the market rate units created with the bonus provision should be within 10 percent of the square footage of the Workforce Housing units with the same number of bedrooms.
5. Workforce Housing should be available to households of varying income levels up to 120 percent of the Area Median Income (AMI) for the Washington Metropolitan Statistical Area (MSA) adjusted for household size, as determined periodically by the U.S. Department of Housing and Urban Development.
6. Workforce housing provided in “for-sale” developments of all construction types or in rental developments built in steel and concrete should be allocated to three equal groupings or tiers as follows:
 - The first tier should be priced so as to be affordable to households making up to and including 80 percent of the AMI, adjusted for household size.
 - The second tier should be priced so as to be affordable to households making up to and including 100 percent of the AMI, adjusted for household size.
 - The third tier should be priced so as to be affordable to households making up to and including 120 percent of the AMI, adjusted for household size.

However, development proposals may voluntarily designate that more than one-third of the units be provided for households with maximum income limits below 80 percent of the AMI.
7. Workforce housing in rental developments in wood and masonry building construction types should be allocated to two equal groupings or tiers as follows:
 - The first tier should be priced so as to be affordable to households making up to 80 percent of the AMI, adjusted for household size.
 - The second tier should be priced so as to be affordable to households making up to 100 percent of the AMI, adjusted for household size.

However, development proposals may voluntarily designate that more than one-half of the units be provided for households with maximum income limits below 80 percent of the AMI.

Wakulla County Comprehensive Plan: Goals, Objectives, Policies in the Housing Element²²

- Goal: To promote adequate, safe and sanitary housing at affordable costs to meet the needs of the present and future residents of the County recognizing the private sector as the primary provider for housing.

- Objective 1: To assist the private sector in providing an appropriate mix of housing types, as defined in the County's housing inventory study, and to apply innovative planning and design techniques, in both housing structures and land development, and to conserve and preserve natural systems and resources. The County will require, through development review and approval, an appropriate mix of very low, low and moderate income level housing.
- Policy 1.2: All proposed nonresidential developments which will employ twenty-five (25) or more full-time employees shall be required to provide an affordable housing study to determine whether an adequate supply of affordable housing to support the income levels of the development's employees exists concurrently with the proposed project phasing schedule. The Land Development Codes shall be revised to provide the form and content of information needed for said study. The County shall develop a program to ensure the timely dissemination and explanation of land development regulations, particularly when such regulations are amended.

Additional Resources

- [The Guidebook for the Development of Workforce Housing](#)²³
- [South Florida workforce Housing Best Practices](#)²⁴
- [United Way of Greenwich Community Planning Council Workforce Housing Study](#)²⁵
- [Affordable/Workforce Housing Toolkit](#)²⁶

Chapter 4: Land Use

Communities are taking actions to prevent non-compatible land uses from interfering with each other, particularly when these land uses may negatively affect residential or natural areas.

4.a Potentially Contaminating Land Uses

Comprehensive Plans

Raleigh, North Carolina

- Policy EP 5.1 Urban Forestry: Expand and strengthen urban forestry and tree preservation programs to protect the existing tree cover and add to it. (p129)
- Policy EP 5.2 Tree Canopy Standards: Maintain appropriate tree canopy coverage along 50 percent or more of all available sidewalk planting/landscape strips between the sidewalk and the curb. (p129)
- Policy EP 5.3 Canopy Restoration: Promote the reforestation of tree coverage that is typically lost during urban and suburban development through tree conservation, targeted tree plantings, urban forestry, and street tree plantings. (p130)
- C.3 Water Quality and Conservation Policies and actions (p122-125)
 - Policy EP 3.1 Water Quality BMP's—Use non-structural Best Management Practices (BMPs) in an effort to improve water quality, such as public education programs, monitoring and control of illicit discharges, expansion of the greenway concept to include "receiving lands" that can absorb storm surge overflows, and update of the City's sediment control program with an orientation toward performance measures

Washington, D.C.

- Environmental Protection Chapter Policy E-4.1.5: Improving Air Quality Through Transportation Efficiency: Promote strategies that reduce motor vehicle emissions in the District and surrounding region. As outlined in the Land Use and Transportation Elements of this Comprehensive Plan, this includes the development of a fully integrated regional system of buses, streetcars, rail transit, bicycles, taxis, and pedestrian facilities to make it easier and more convenient to travel without an automobile. It also includes the promotion of trip reduction measures such as videoconference facilities, telecommuting, flextime, and carpooling. Strategies to reduce congestion and idling time, such as improved signal timing and reversible commute lanes also should contribute to air quality improvement.

Philadelphia

- Goal—Philadelphia Reduces Its Environmental Footprint—Benchmarks:
- Reduce Greenhouse Gas Emissions by 20 percent.
- Improve Air Quality toward Attainment of Federal Standards.

Omaha, Nebraska

- Land Use Element: The City should study the effect of stormwater from new development and adopt policies which will prevent future flooding problems. The City should study methods of financing improvements related to stormwater detention and management. (p61-64)
 - Policies 1. The City will develop and adopt a comprehensive stormwater management plan that identifies acceptable levels of impact from development and identifies measures to mitigate adverse impacts. This stormwater management plan should place priority on regional stormwater management.
 - Implementation (a) The City, in conjunction with the NRD, will establish a Stormwater Management Task Force to develop stormwater management standards, including standards related to flood peaks, flood stage, flood velocity, erosion and sedimentation and to identify major regional stormwater management facilities.²⁷

4.b Brownfield Cleanup

Comprehensive Plans

Niagara County, New York

- Chapter II: Develop a regional inventory and marketing strategies for vacant, underutilized and Brownfield properties. (p12)
- Chapter V: Encourage infill forms of mixed-use and multiple use development and the redevelopment of vacant, underutilized and brownfield and/or grayfield sites thereby discouraging development of undeveloped greenfield locations especially where extensions of public infrastructure and services might be required. (p29)
- Chapter VI: Encourage commercial and industrial development on vacant and underutilized lands including reuse of brownfield/greyfield sites areas. (p22)²⁸

Additional Resources

- [NY Dept. of Environmental Conservation: Brownfield Cleanup Program](#)²⁹
- [VT Brownfields Reuse Initiative Cleanup Standards and Guidance](#)³⁰
- [WI Remediation & Redevelopment \(RR\) Program](#)³¹
- [WI Econ Develop. Corp. Blight Elimination and Brownfield Redevelopment Program \(BEBR\)](#)³²

Chapter 5: Transportation/TDM Strategies

Communities are interested in incorporating Travel Demand Management (TDM) strategies and other innovative transportation plans into their community planning and resources are available to assist with this endeavor.

Additional Resources

- [King County, WA, TDM Market Analysis Report](#)³³
 - [TDM Survey](#)³⁴
- [Comprehensive Transport Planning: Creating a Comprehensive Framework for Transportation Planning and Policy Analysis](#)³⁵
- [Commuter Choice Primer](#)³⁶
- [Anoka County TMO Commute Solutions, MN](#)³⁷

Chapter 6: Climate Change Issues

There are many issues related to climate change that communities are currently facing that range from dealing with emergency events such as extreme heat or precipitation, to working proactively to reduce energy usage through energy efficient building codes and reduced VMTs (vehicle miles travelled).

6.a Extreme Heat Events

Additional Resources

- [Heat and Cold Emergency Task Force](#)³⁸
- [Excessive Heat Events Guidebook](#)³⁹
- [New York City, NY](#)
 - When the heat index is predicted to be dangerously high, New York City opens cooling centers in air-conditioned public community centers, senior centers, and public libraries to offer people relief from the heat.⁴⁰

6.b Adaptation Measures due to Warming Climate

Comprehensive Plans

San Francisco, CA⁴¹

- Conservation Element—A. Climate Change & Sustainable Development.
- Goal: To be prepared for, and able to adapt to adverse climate change impacts.
- Policy CE-A.2: Reduce the City's carbon footprint. Develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth in the General Plan to:
 - Create sustainable and efficient land use patterns to reduce vehicular trips and preserve open space;
 - Reduce fuel emission levels by encouraging alternative modes of transportation and increasing fuel efficiency;
 - Improve energy efficiency, especially in the transportation sector and buildings and appliances;
 - Reduce the Urban Heat Island effect through sustainable design and building practices, as well as planting trees (consistent with habitat and water

conservation policies) for their many environmental benefits, including natural carbon sequestration;

- Reduce waste by improving management and recycling programs;
- Plan for water supply and emergency reserves.

Palm Beach County, FL⁴²

- Coastal Management Element Policy 2.4-d: Palm Beach County shall maintain a Local Mitigation Strategy program (LMS) with the purpose of developing and implementing a unified approach among County and municipal governments for dealing with identified hazards and hazard management problems. The program's primary objectives shall (p241):
 - Improve the community's resistance to damage from identified natural, technological, and social hazards;
 - Increase Palm Beach County's eligibility for receiving local, state, federal, and other mitigation funds;
 - Reduce the cost of disasters; and
 - Expedite post-disaster community recovery.

North Miami, FL⁴³

- Goal: Hurricane Evaluation and Disaster Preparedness (p1-11)
 - Objective 1.8: The City shall coordinate with Miami-Dade County, the South Florida Regional Planning Council and the State of Florida in addressing the evacuation, structural integrity and disaster-preparedness needs of North Miami.
 - Policy 1.8.4 By January 2009, the City should develop a City Emergency Plan addressing disaster preparedness, hurricane evacuation, and post-disaster redevelopment plans, procedures, and personnel duties.

San Francisco, CA⁴⁴

- Public Facilities, Services & Safety Element – Disaster Preparedness.
 - Goals:
 - A city and region that, through diligent planning, organizing, and training is able to prevent, respond to, and recover from man-made and natural disasters.
 - Prompt and efficient restoration of normal City functions and activities following a disaster.
 - Policies:
 - PF-P.3 Develop and maintain current, integrated, and comprehensive Emergency Operations and Disaster Plans on an annual basis.
 - Prepare and maintain a comprehensive multi-modal evacuation plan.
 - Policy PF-P.6 Coordinate citywide emergency management and disaster planning and response through the integration of key City departments into the preparedness and decision-making process.

Gilbert, AZ⁴⁵

- The "Environmental Planning Element" in the Gilbert, Arizona general plan lists mitigating heat islands as a core goal. Specific policies under the goal include: 1) developing criteria to evaluate development projects that contribute to the heat island effect and identify mitigation techniques; 2) seeking partnerships with other municipalities, educational institutions, utility companies, government entities, and other to promote heat island awareness among landowners, developers, engineers, and architects; 3) encouraging design concepts utilizing planned and engineered green space and urban forestry to maximize shading of paved areas and buildings; 4) promoting education and awareness of the public, designers and applicants for the development and use of materials and construction techniques to help mitigate the urban heat island effect; and 5) providing for a reduction of the stormwater retention requirements where a grading and drainage report demonstrates a reduced stormwater storage capacity results from the use of pervious pavements on a site. One step in implementing the plan involved the development of a brochure on the use of cool pavements to reduce the urban heat island effect.

District of Columbia⁴⁶

- State Implementation Plan - The Washington D.C. region's State Implementation Plan includes a Regional Canopy Management Plan as a ground-level ozone reduction strategy. The plan involves working with local governments to establish goals for increasing tree canopy coverage and decreasing ground-level ozone pollution.

Evanston, IL⁴⁷

- City of Evanston Design Guidelines for Planned Developments - The City of Evanston, Illinois, includes permeable pavements in its assessment of green buildings.

Maryland⁴⁸

- Maryland's State Implementation Plan - Maryland's State Implementation Plan includes a regional forest canopy program that aims to reduce the heat island effect. The program involves assistance and outreach to encourage tree plantings through the coordination of various state and local agencies. This program would be housed within the Department of Natural Resources and would be charged with management of a tree planting database and promoting outreach efforts to landowners and stakeholder groups.

Portland, OR⁴⁹

- Central City Fundamental Design Guidelines - The City of Portland, Oregon is encouraging on the use of green roofs in the city center district, primarily for their aesthetic and stormwater management benefits. Design guidelines call for integrating vegetated roofs into central city projects.

Knoxville, TN⁵⁰

- Knoxville Street Tree Master Plan - Knoxville Master Street Tree Plan surveys the existing tree cover in Knoxville and Knox County and develops strategies to preserve and increase the urban canopy. Knoxville has established guiding principles, designated

preferred species of trees, and evaluated and implemented opportunities to plant throughout the city.

Austin, TX⁵¹

- Austin Heat Island Mitigation - In May 2001, the Austin City Council adopted a heat island mitigation resolution that committed the city manager to review recommendations for a variety of activities to diminish the city's heat island. In September of that year, the City Council awarded \$1 million towards implementing the recommendations, which ranged from developing a cool roof strategy to increasing enforcement of the city's tree-saving ordinance. Austin's Climate Protection Plan incorporates heat island reduction through its green building and energy efficiency elements. [Austin Climate Protection Plan](#)

Dallas, TX⁵²

- Dallas Sustainable Skylines Initiative - The Sustainable Skylines initiative is a three-year partnership between the City of Dallas, the U.S. Environmental Protection Agency, and the North Central Texas Council of Governments (NCTOG) to promote sustainability within the City via voluntary programs which emphasize air quality improvements. The initiative has identified the following categories of potential projects to initially perform together: green buildings project, creating a greenhouse gas strategy, green taxis project, off-road equipment replacements and retrofits, renewable energy/energy efficiency outreach program, and an urban heat island project. The goal of the urban heat island project is to develop and implement an urban heat island program for the City of Dallas that will both decrease heated surfaces and increase permeability of surfaces in the Central City and other areas of Dallas.⁵³ [Urban Heat Island Project](#)

Highland, UT⁵⁴

- Highland City General Plan - The Town of Highland, Utah, created a master plan for a 50-acre (200,000 m²) overlay zone to be privately developed as a town center. The city design guidelines for the zone recommended several heat island mitigation elements, including reflective roofing, reflective parking lot surfaces, and landscaping. Those guidelines were then adopted into the zoning requirements for the town center.

Fairfax Co, VA⁵⁵

- Tree Action Plan - In June 2007, Fairfax County, Virginia set a precedent by selecting an urban forestry canopy goal of 45%. The county developed this target after it determined that current tree management efforts would lead to a decrease in canopy size from 41% to 37% over the next 30 years. To combat this loss, the county has proposed increasing the average number of trees planted from 21,000 to 84,000, justifying the expense of additional trees by citing the multiple benefits they provide.

Ordinances and Regulations

Kansas City, MO⁵⁶

- Green Parking Ordinance - Kansas City, Missouri's proposed parking ordinance contains several innovative planning techniques aimed at reducing the amount of parking and properly filtrating stormwater from parking lots. The ordinance allows for less parking where appropriate and increases shared parking options, especially in downtown areas or along transit stops. The ordinance also sets landscaping requirements for parking lots and provides options for pervious pavements to enhance stormwater management.

Portland, OR⁵⁷

- Central City Plan District Zoning Code - In 2001, Portland, Oregon modified its zoning code to include an "eco-roof development bonus" for developers to install green roofs (which are called "eco-roofs" in the code). In Title 33 of the Zoning Code there is a floor area ratio bonus for projects that install green roofs in Portland's central district. The bonus amount depends on the extent of the green roof coverage. If the green roof covers 60% or more of the roof surface, developers can build an additional 3 square feet (0.3 m²) for each square foot of green roof. If the green roof covers a lower percent of the surface, the bonus is reduced.⁵⁸

Dallas, TX⁵⁹

- Dallas Sustainable Skylines Initiative - The Sustainable Skylines initiative is a three-year partnership between the City of Dallas, the U.S. Environmental Protection Agency, and the North Central Texas Council of Governments (NCTOG) to promote sustainability within the City via voluntary programs which emphasize air quality improvements. The initiative has identified the following categories of potential projects to initially perform together: green buildings project, creating a greenhouse gas strategy, green taxis project, off-road equipment replacements and retrofits, renewable energy/energy efficiency outreach program, and an urban heat island project. The goal of the urban heat island project is to develop and implement an urban heat island program for the City of Dallas that will both decrease heated surfaces and increase permeability of surfaces in the Central City and other areas of Dallas.

Seattle, WA⁶⁰

- Seattle Green Factor - Seattle has adopted minimum landscape requirements, known as the Seattle Green Factor, for new developments in commercial areas in the city. This program requires that, as of late January 2007, certain new developments in neighborhood business districts must provide for vegetative cover on the equivalent of 30% of the applicable property. The regulations apply to developments with more than four dwelling units, more than 4,000 square feet (370 m²) of commercial uses, or more than 20 new parking spaces. Developers can use a menu of strategies, including planting new trees, preserving trees, and installing green roofs and green walls to meet this target. The regulations are part of the city's Commercial Code and encourage planting of layers of vegetation and larger trees in areas visible to the public. The rules also include bonuses for harvesting rain water and choosing plants that need less water. The city has developed a worksheet to help applicants calculate a "score" that indicates whether various mixes of landscaping measures meet the requirements, which will allow developers to try different combinations of features.

Additional Resources

- [MDH and Comprehensive Planning](#)⁶¹
- [Urban Heat Island Mitigation](#)⁶²
- [Reducing Urban Heat Islands: Compendium of Strategies](#)⁶³
- [Smart Growth and Urban heat Islands](#)⁶⁴
- [Cooling Summertime Temperatures: Strategies to Reduce Urban Heat Islands](#)⁶⁵
- [Mitigation Impact Screening Tool \(MIST\)](#)⁶⁶
- [City of Chicago \(2010\). *Chicago Climate Action Plan* \(PDF\)](#)⁶⁷
- [Adapting to Climate Change in Minnesota](#)⁶⁸
- [Wisconsin Initiative on Climate Change Impacts \(WICCI\)](#)⁶⁹

6. c Converting Community Facilities/Fleets/Operations to Carbon-Neutral

Additional Resources

- [City of Santa Barbara Strategies](#)⁷⁰
- [Gold Coast City Carbon Neutral by 2020](#)⁷¹
- [City of Sydney Carbon Neutral](#)⁷²
- [City of Topeka, Energy Efficiency & Conservation Strategy](#)⁷³

6.d Energy Efficient Building Codes

Ordinances and Regulations

Chula Vista, CA⁷⁴

- Building Code; Demonstration Project; Green Building Program and Standards; Tree and Landscape Ordinance - The City of Chula Vista has identified 11 climate adaptation strategies, three of which directly address urban heat islands: they include the installation

of cooler paving products, cooler roofing materials, and the incorporation of more shade trees. The city is sponsoring a demonstration project that will evaluate multiple reflective pavement technologies and develop implementation options based on these results. It is also working to amend its green building standards code to require cool roofs on all new residential developments, as well as developing a policy to require all municipal improvement projects and private parking lot development projects to incorporate a certain percentage of shade trees based on the development size.

Martinez, CA⁷⁵

- Martinez Climate Action Plan - Martinez Climate Action Plan – The City of Martinez is addressing the issue of urban heat islands in its climate action plan. The city aims to reduce the heat island effect through targeted upgrades of existing buildings and paved areas; adoption of new building standards, including the new cool roof standard contained in California's Title 24 Energy Standards; tree planting; and new requirements for shading in new parking lots and other large paved areas.

Boston, MA⁷⁶

- Green Building Zoning Code - Boston is decreasing carbon emissions associated with energy use in privately owned and operated buildings by implementing a Green Building Zoning Code. The zoning code requires all major construction projects greater than 50,000 square feet to adhere to the U.S. Green Building Council's LEED certification standards. Two of the points for this certification can be obtained by using urban heat island reduction strategies, one point coming from cool or green roofs and the other from non-roof strategies.

New York City, NY⁷⁷

- NYC CoolRoofs - In 2008 New York City put into place a building code that requires most new buildings to have 75% of the roof area covered with a reflective, white coating, or to be ENERGY STAR® rated as highly reflective. To date nearly 1,600 volunteers have coated more than 1.5 million sq. ft. of rooftops throughout the city. This building code will help save money, preserve roof structure and cooling equipment, reduce energy use, reduce carbon emissions, and combat the urban heat island effect.

Additional Resources

City of Chicago Climate Action Plan Energy Efficient Buildings⁷⁸

Mitigation Strategies for 2020

1. Retrofit Commercial and Industrial Buildings

- Retrofit 50 percent of commercial and industrial building stock, resulting in a 30 percent energy reduction = 1.3 MMTCO₂e reduction*

2. Retrofit Residential Buildings

- Improve efficiency of 50 percent of residential buildings to achieve a 30 percent reduction in energy used = 1.44 MMTCO₂e reduction*

3. Trade in Appliances

- Expand appliance trade-in and lightbulb replacement programs = .28 MMTCO₂e reduction*

4. Conserve Water

- Improve water use efficiency in buildings as part of retrofits = .04 MMTCO₂e reduction*

5. Update City Energy Code

- Align Chicago's Energy Conservation Code with the latest international standards = 1.13 MMTCO₂e reduction*

6. Establish New Guidelines for Renovations

- Require all building renovations to meet green standards = .31 MMTCO₂e reduction*

7. Cool with Trees and Green Roofs

- Increase rooftop gardens to a total of 6,000 buildings citywide and plant an estimated 1 million trees = .17 MMTCO₂e reduction*

8. Take Easy Steps

- Encourage all Chicagoans to take easy steps to reduce their emissions by one metric ton of CO₂e per person = .8 MMTCO₂e reduction*

6. e Reducing GHG Community Wide

Additional Resources

- [Dubuque GHG Reduction Plan](#)⁷⁹
- [City of Winston-Salem GHG Inventory and Local Action Plan to Reduce Emissions](#)⁸⁰
- [City of Topeka, Energy Efficiency & Conservation Strategy](#)⁸¹

6.f Severe Rain Events or Increased Precipitation

Ordinances and Regulations

Portland, OR⁸²

- Mandatory hierarchy for on-site infiltration or other practices to the maximum extent practicable (MEP).

Seattle, WA⁸³

- All projects > 2000SF new and replaced impervious surfaces are required to compost amend all disturbed pervious areas, and implement green stormwater infrastructure practices to the maximum extent feasible (MEF). For areas with >10,000 SF impervious flow control performance based thresholds must also be demonstrated; For majority of Seattle creeks drainage basins site must achieve predeveloped pasture condition for peak and duration up to the 2-year flood frequency; For CSO and capacity constrained systems peak control target for 2 year and 25 year flood frequency events must be demonstrated. Additional requirements to protect wetlands to maintain hydroperiod.

Olympia, WA⁸⁴

- Control 91 percent of runoff volume infiltrated through on-site controls for quality; post-development flow to meet predevelopment rates for quantity. Santa Monica, CA 0.75-inch reduction of urban runoff from all impermeable surfaces through infiltration or treatment and release.

San Jose, CA⁸⁵

- Control either 85 percent of 24-hour storm runoff event (using volume treatment control measures (TCMs)) or 10 percent of the 50-year peak flow rate (using flow TCMs), but must use landscape-based treatment and trees to MEP.

Emeryville, CA⁸⁶

- Site design and source control measures, maximize pervious surfaces, and treatment using landscaping. Post-construction quality must meet pre-construction standards, to MEP. Reporting on the amount of impervious surface created/replaced.

Lenexa, KS⁸⁷

- Manage 1.37 inches of water quality volume using LID treatment train approach; pay into system for quantity (used to fund regional projects). Natural channels preserved to MEP.

Chicago, IL⁸⁸

- Manage 0.5 inch runoff from all impervious surfaces or reduce imperviousness by 15 percent.

Alachua County, FL⁸⁹

- Limit the proportion of the area of stormwater facilities to total site area through reduction of impervious surfaces via vertical construction and use of alternative parking surfaces (to MEP); Stormwater management facilities must use site contours and minimize disturbance to existing natural features (to MEF). Anti-degradation requirements for water quality.

Philadelphia, PA⁹⁰

- Four areas of focus and associated requirements: channel protection (control one year storm), flood protection (post-development conditions must be equal to pre-

development), water quality (infiltrate/manage first 1 inch from all directly connected impervious surfaces), and site design requirements to reduce imperviousness. Redevelopments may be exempt from channel and flood protection. Stafford County, VA LID practices must be used to MEP to meet quality and quantity requirements.

Wilsonville, OR⁹¹

- Provide on-site detention and water quality facilities; post-development runoff rates must not exceed predevelopment rates; Revising standards now based on pilot neighborhood project using green infrastructure.

Additional Resources

City of Chicago Climate Action Plan⁹²

- To prevent combined sewer overflows that result in sewage flowing into the Chicago River, the city is building a deep tunnel system to expand capacity during flood events. ^[3]

6.g Reduction in VMTs

Ordinances and Regulations

WA State: Reducing Vehicle Miles Travelled⁹³

- The new law also imposes requirements for reducing the annual vehicle miles traveled ("VMTs") by residents of the state, which amounts to a surrogate for reducing GHG emissions from the transportation sector. HB 2815 requires the Washington Department of Transportation ("DOT") to adopt broad statewide goals for reducing annual per capita vehicle miles travelled, including adopting benchmarks to decrease the annual per capita vehicle miles travelled by 18% by 2020, by 30% by 2035, and by 50% by 2050.[13] In order to achieve these benchmarks, DOT is required to facilitate a collaborative process with other government agencies and business interests to develop tools and best practices for reducing VMTs. As part of this process, DOT must, among other things:
 - Identify VMT reduction strategies being successfully implemented in other jurisdictions;
 - Identify new revenue options for implementing VMT reduction efforts;
 - Provide effective tools for measuring VMT reduction strategies;
 - Establish a process for measuring the success of VMT reduction programs; and
 - Estimate projected reductions in GHG emissions if VMT benchmarks are achieved.[14]
 - DOT must provide a report to the legislature by December 1, 2008 on the collaborative process and recommended strategies for reducing VMTs.

Additional Resources

Fuel Efficiency and VMT Reduction in Dubuque⁹⁴

There are many strategies for reducing VMTs in Dubuque, all of which are highly complementary. In other words, the strategies are not redundant, but enhance each other like pieces to a puzzle. Here is a short description of each option.

- *Complete Streets* is a planning and design process that ensures that the health, safety, and mobility of all transportation users are considered in all phases of road project planning, including motorists, pedestrians, bicyclists, public transit users, commercial vehicles, and people of all ages and abilities. Green Dubuque has previously researched the costs and benefits of Complete Streets to Dubuque; that report can be found [here](#).⁹⁵
- *The Smarter City Intelligent Transportation Solution* (Smarter City ITS) is a partnership between the City of Dubuque and IBM to provide a sophisticated system for analyzing real-time transportation data in order to improve system efficiency by addressing land use, economic development, and transportation planning for a comprehensive transportation network that is less dependent on cars.⁹⁶
- *The Southwest Arterial* will be a 6.1-mile four-lane divided freeway that will provide an alternative route for traffic through southwestern Dubuque. The primary benefits of the SW Arterial will be reducing traffic congestion within the city, improving air quality, and reducing travel times, thereby reducing VMTs.⁹⁷
- *The Dubuque Intermodal Transportation Center* (DITC) is a proposed facility that will connect air, rail, bus, automobile, and river traffic at a single centrally-located integrated transportation hub.⁹⁸
- *New bus fleet.* In 2010, Dubuque received Federal grants to replace the Keyline (now known as the [Jule](#)) bus fleet and equip the new buses with intelligent transportation system (ITS) technology, which includes scheduling and tracking software that will allow transit users to more easily find their routes and track bus arrivals and departures. The new buses will be clean diesel vehicles, which will significantly reduce fuel costs and tailpipe emissions.⁹⁹
- *Bus system transformation.* In 2009-2010, the City of Dubuque and ECIA began an initiative to rebrand the former Keyline transit system and improve the design and management of routes and operations.¹⁰⁰
- *Particle filters and black carbon.* Black carbon has been estimated to be the second or third leading cause of climate change and is also an air quality and health hazard. The majority of black carbon emissions in the US comes from diesel engines, so retrofitting municipal diesel vehicles with particle filters can significantly reduce these emissions and improve local air quality.¹⁰¹
- *Unbundled parking.* Unpriced parking spaces are typically “bundled” with building costs, meaning that those spaces are automatically included as hidden fees in building purchases or rents. Unbundled parking refers to parking spaces being sold or rented separately according to the occupant’s actual needs. For instance, instead of renting an apartment for \$1000 per month with two parking spaces at no extra cost, the apartment would be rented for \$800 and each parking space could be rented for \$100 per month.

Chapter 7: Noise and Air Quality

Noise and air quality issues are central concerns of many communities. Comprehensive plans include language on these issues, and many communities have specific ordinances and regulations drafted on these issues.

Comprehensive Plans

7.a Air Quality

*Raleigh, North Carolina*¹⁰²

- Policy EP 5.1 Urban Forestry: Expand and strengthen urban forestry and tree preservation programs to protect the existing tree cover and add to it. (p129)
- Policy EP 5.2 Tree Canopy Standards: Maintain an appropriate tree canopy coverage along 50 percent or more of all available sidewalk planting/landscape strips between the sidewalk and the curb. (p129)
- Policy EP 5.3 Canopy Restoration: Promote the reforestation of tree coverage that is typically lost during urban and suburban development through tree conservation, targeted tree plantings, urban forestry, and street tree plantings. (p130)

○ *Washington, D.C.*¹⁰³

- Environmental Protection Chapter Policy E-4.1.5: Improving Air Quality Through Transportation Efficiency: Promote strategies that reduce motor vehicle emissions in the District and surrounding region. As outlined in the Land Use and Transportation Elements of this Comprehensive Plan, this includes the development of a fully integrated regional system of buses, streetcars, rail transit, bicycles, taxis, and pedestrian facilities to make it easier and more convenient to travel without an automobile. It also includes the promotion of trip reduction measures such as videoconference facilities, telecommuting, flextime, and carpooling. Strategies to reduce congestion and idling time, such as improved signal timing and reversible commute lanes also should contribute to air quality improvement.

○ *Philadelphia*¹⁰⁴

- Goal—Philadelphia Reduces Its Environmental Footprint—Benchmarks:
 - Reduce Greenhouse Gas Emissions by 20 percent.
 - Improve Air Quality toward Attainment of Federal Standards.

Ordinances and Regulations

*The Commonwealth of Massachusetts*¹⁰⁵

- Air Pollution Control Regulations
- Regulation 310 CMR 7.10 : Noise
 - (1) No person owning, leasing or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise.
 - (2) 310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressible and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise.
 - (3) 310 CMR 7.10(1) shall not apply to sounds emitted during and associated with:
 - parades, public gatherings, or sporting events, for which permits have been issued provided that said parades, public gatherings, or sporting events in one city or town do not cause noise in another city or town;
 - emergency police, fire, and ambulance vehicles;
 - police, fire, and civil and national defense activities;
 - domestic equipment such as lawn mowers and power saws between the hours of 7:00 A.M. and 9:00 P.M.
 - (4) 310 CMR 7.10(1) is subject to the enforcement provisions specified in 310 CMR 7.52.

The Commonwealth of Massachusetts

Division of Air Quality Control Policy

- This policy is adopted by the Division of Air Quality Control. The Department's existing guideline for enforcing its noise regulation (310 CMR 7.10) is being reaffirmed.
- A source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source:
 - Increases the broadband sound level by more than 10 dB(A) above ambient, or
 - Produces a "pure tone" condition - when any octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by 3 decibels or more.
- These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound level that is exceeded 90% of the time measured during equipment operating hours. The ambient may also be established by other means with the consent of the Department.

Boston: Air Pollution¹⁰⁶

The Boston Air Pollution Control Commission (APCC) protects air quality in the City of Boston. Its Regulations for the Control of Atmospheric Pollution prohibit the emission of air contaminants in such concentration or of such duration as:

- a.) to cause a nuisance; or
- b.) to be injurious or tend to be, on the basis of current information, injurious to human or animal life, vegetation, or to property; or
- c.) to unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.

The regulations have specific provisions addressing:

- [parking freeze](#),
- permissible types of fuel in stationary facilities,
- density of smoke from smoke stacks,
- [abrasive blasting and chemical cleaning of buildings](#)
- open burning (generally not permitted; contact the [Boston Fire Department](#) for more information),
- dust from construction sites,
- abrasive blasting,
- [noise from construction sites, ventilation equipment, and other sources](#),
- smoke from industrial sites,
- and [exhaust from idling vehicles](#).

Because air travels freely across political boundaries, the APCC actively cooperates with other [local, regional, state, and federal agencies](#) to develop strategies and implement programs to improve air quality throughout New England.

The APCC writes and enforces regulations, grants permits, advises other City Hall departments, holds public hearings, and cooperates with other local, regional, state, and federal agencies in the pursuit of common goals.

The APCC enforces state and city ordinances against excessive [idling of vehicle engines](#). It also participates in a region-wide campaign to encourage the voluntary retrofitting of diesel-powered vehicles with pollution control equipment

7.b Noise Quality

Comprehensive Plans

San Diego, California¹⁰⁷

- Noise Element
 - NE-A.1: Separate excessive noise-generating uses from residential and other noise-sensitive land uses with a sufficient spatial buffer of less sensitive uses. (pNE-6)

- NE-A.3: Limit future residential and other noise-sensitive land uses in areas exposed to high levels of noise. Note: All California plans are required to have an element on noise. (pNE-6)

Ordinances and Regulations

Boston Noise¹⁰⁸

No person shall make or cause to be made any unreasonable or excessive noise in the City, by whatever means or from whatever means or from whatever source.

As used herein, the following terms shall have the following meanings:

- a) dBa shall mean A-weighted sound level in decibels, as measured by a general purpose sound level meter complying with the provisions of the American National Standards Institute, "Specifications for Sound Level Meters (ANSI S1.4 1971)", properly calibrated, and operated on the "A" weighting network.
- b) Loud amplification device or similar equipment shall mean a radio, television, phonograph, stereo, record player, tape player, cassette player, compact disc player, loud speaker, or sound amplifier which is operated in such a manner that it creates unreasonable or excessive noise.
- c) Unreasonable or excessive noise shall mean
 1. Noise measured in excess of 50 dBa between the hours of 11:00 p.m. and 7:00 a.m., or in excess of 70 dBa at all other hours; or
 2. In the absence of an applicable noise level standard or regulation of the Air Pollution Control Commission, any noise plainly audible at a distance of three hundred (300') feet or, in the case of loud amplification devices or similar equipment, noise plainly audible at a distance of one hundred (100') feet from its source by a person of normal hearing.

(Ord. 714 § 354; Ord. 1991 c. 4 § 1) Penalty, see subsection 16-32.6

16-26.2 Unreasonable Noise-Making Automobile Safety Devices.

The use, maintenance, installation or keeping of any device whose purpose it is to protect an owner's vehicle from damage and/or theft through the mechanical creation of a noise of sufficient magnitude to be plainly audible at a distance of two hundred (200') feet from such device which does not automatically terminate any such noise within five (5) minutes shall be unlawful. Penalty for violation of this section shall be a fine of fifty (\$50.00) dollars. This section shall be deemed a part of the Environment Protection Ordinances, so called, and shall be enforced pursuant to the provisions of Chapter 40, Section 21D of the General Laws.

(Ord. 1984 c. 4; [354a]) Penalty, see subsection 16-32.6

16-26.3 Unreasonable Noise From Automobile Safety Devices.

The use of any device whose purpose it is to protect an owner's vehicle from damage and/or theft through the mechanical creation of a noise of sufficient magnitude to be plainly audible at a distance of two hundred (200') feet from such device which does not automatically terminate any such noise within five (5) minutes shall be declared an unlawful use of a noise making instrument. The penalty for violation of this ordinance shall be fifty (\$50.00) dollars and shall be in compliance with the provisions of Chapter 40, Section 21D of the General Laws. This section shall be deemed a part of the Environment Protection Ordinances, so called.

(Ord. 1984 c. 5 § 1 [354b]) Penalty, see subsection 16-32.6

16-26.4 Regulation of Construction Hours.

No erection, demolition, alteration, or repair of any building and excavation in regard thereto, except between the hours of 7:00 a.m. and 6:00 p.m., on weekdays or except in the interest of public safety or welfare, upon the issuance of and pursuant to a permit from the Commissioner, Inspectional Services Department, which permit may be renewed for one or more periods of not exceeding one week each.

(Ord. 1984 c.10 § 1 [354c]; Ord. 1991 c. 5 § 38) Penalty, see subsection 16-32.6

Editor's Note:

The Building Department and the Housing Inspection Department were abolished and all powers and duties transferred to the Inspectional Services Department by Ch. 19 of the Ordinances of 1981 (Section 9-9 of this Code).

16-26.5 Noise Levels at Residential Lot Lines.

It shall be unlawful for any person except in emergencies by Public Utility Companies to operate any construction device(s), including but not limited to impact devices, on any construction site if the operation of such device(s) emits noise, measured at the lot line of a residential lot in excess of 50 dBa between the hours of 6:00 p.m. and 7:00 a.m.

(Ord. 1985 c. 3 § 1 [354d]) Penalty, see subsection 16-32.6

Omaha, NE

- The City of Omaha has an ordinance regulating noise within zoning districts, how much can spill out onto adjacent properties and buffering provisions like screening to mitigate noise (Chapter 55: Sec. 55-803 through Sec. 55-804).¹⁰⁹

Additional Resources

- No Noise¹¹⁰

Chapter 8: Maintaining Older Housing

Maintaining older rental properties is an issue that many established communities struggle with. Various options exist to combat aging housing stock and creating neighborhood reinvestment.

Comprehensive Plans

*San Francisco City Plan Housing Element*¹¹¹

ISSUE 2	CONSERVE AND IMPROVE EXISTING STOCK
OBJECTIVE 2	Retain existing housing units, and promote safety and maintenance standards, without jeopardizing affordability.
Policy 2.1	Discourage the demolition of sound existing housing, unless the demolition results in a net increase in affordable housing.
Policy 2.2	Retain existing housing by controlling the merger of residential units, except where a merger clearly creates new family housing.
Policy 2.3	Prevent the removal or reduction of housing for parking.
Policy 2.4	Promote improvements and continued maintenance to existing units to ensure long term habitation and safety.
Policy 2.5	Encourage and support the seismic retrofitting of the existing housing stock.

Ordinances and Regulations

Coon Rapids, MN

- All rental properties must be licensed by the City's Neighborhood Reinvestment Division before tenants move into the unit – including single family homes. An

inspection of the property is a required step in obtaining a rental license. Refer to City Code Chapter 12-1900. The division also administers various programs/loans/code enforcement activities to encourage improvements to the City's housing stock.¹¹²

St. Paul, MN

- Chapter 189 of the Saint Paul Legislative Code requires all single family and duplex homes for sale in the city to have a Truth-in-Sale of Housing disclosure report prepared by an independent evaluator who has been certified and made available to prospective buyers. A Truth-In-Sale of Housing reports "disclosure only", and does not mandate repairs unless so deemed by the Fire Marshall's office.¹¹³

Richfield, MN

- In 1989, the Richfield City Council passed an ordinance (section 408.01) which required that all single family and two-family homes in the City (including condominiums) be inspected by the City Inspection Division and a Certificate of Housing Maintenance be obtained prior to the transfer of ownership or closing. All residential rental property is required to be licensed and inspected as well. Code deficiency repairs made by the seller must be completed and re-inspected before the closing. The buyer can also make the need repairs if negotiated in the home sale and a cash escrow agreement form is signed.¹¹⁴

Chapter 9: No Smoking and Alcohol Ordinances

Many communities are creating and implementing new ordinances that prevent smoking in public parks and in multi-family housing units and more communities are becoming aware of the dangers of second and third hand smoke. Alcohol ordinances are also a concern for many communities.

Ordinances and Regulations

Woodland, CA

- The city requires “Off-Sale Liquor Establishments” (e.g., supermarkets) not within the Central Business District Zone to be located not within five hundred feet of any other establishment where in alcoholic beverages are sold for both off-site and on-site consumption or such consideration points as schools (public and private), established churches or other places of worship, hospitals, convalescent homes, public parks, and playgrounds and/or other similar uses. The distance of five hundred feet shall be measured between the nearest entrances used by patrons of such establishments along the shortest route to other establishments, or to the nearest property line of any of the above referenced consideration points. The noise level generated by the operation of such establishments shall not exceed 60 dba on adjoining property zoned for residential purposes, and seventy dba for commercially zoned property.¹¹⁵

City of Calabasas: Multi-Family Rental Housing Smoking Ordinance Facts¹¹⁶

- Requires at least 80% of apartment buildings to be permanently designated as non-smoking units by January 1, 2012. According to the California Apartment Association of Los Angeles, the average turnover rate for apartments in Calabasas is currently 3-4 years.
- Landlords were required to submit an initial annual report by July 1, 2008 to the City detailing the number and location of non-smoking and smoking buildings until the required minimum 80% non-smoking buildings have been determined.
- Permits up to 20% of buildings to be designated by landlords as smoking buildings and allows smokers currently in rental units to be ‘grandfathered’ in. Upon proper notification to their landlord, smoking unit tenants will be permitted to continue smoking inside their units even if they are residing in a building designated smoke-free. Relocating to smoke-free or smoking buildings is completely voluntary.
- Prohibits smoking on all multi-unit apartment residence balconies, porches and patios.
- Requires landlords to create outdoor designated smoking areas for smokers as described in section 8.12.051 of the ordinance.
- Requires leases for non-smoking units to contain a clause stating that smoking is prohibited in the unit and that it is a material breach of the lease to violate the terms of

the ordinance. Landlords will be required to provide potential tenants with a floor plan identifying the location of smoking units, non-smoking units and any designated smoking areas.

- Similar to enforcement of noise laws, if a non-smoking unit tenant violates their lease by smoking in violation of the ordinance, they are subject to potential non-renewal. If a landlord receives a two written complaints from different individuals about a non-smoking unit tenant smoking, the tenant may be subject to eviction at the discretion of the landlord.

Burbank Secondhand Smoke Ordinances¹¹⁷

- L. Common residential areas: Smoking is prohibited in and around all (1) swimming pool, Jacuzzi, spa and hot tub areas when children are using such areas for their intended use and not just passing through the area; (2) areas specifically designed as play areas for children; (3) enclosed common areas; and (4) within five feet of all entrances, exits, walkways and hallways in residential development projects including, but not limited to apartments, condominiums, retirement homes, nursing homes, assisted living facilities, and residential portions of mixed-use projects except within smoking areas designated pursuant to Section 4-1-705. Common areas are those areas that are accessible to all residents living in the development, including but not limited to swimming pool, Jacuzzi, spa and hot tub areas, hallways, stairways, elevators, lobbies, laundry rooms, trash rooms, recreation rooms and gyms. For purposes of this section, common area does not include driveways, parking lots and garages. For purposes of this section, "children" shall mean any person age 17 years and under.

M. Private residential areas: Smoking is prohibited in all private balconies, private patios, and private non-enclosed areas in all attached residential developments with two (2) or more dwelling units. The term "private" shall mean any area intended primarily for use by the occupants of a particular residential dwelling unit. [Added by Ord. No. 3055, eff. 2/14/87; Amended by Ord. No. 3795, eff. 5/1/11; 3717.]²³

4-1-704: LOCATIONS WHERE SMOKING IS PERMITTED:

Smoking is permitted in the locations provided in this Section, even when smoking would otherwise be prohibited per Section 4-1-703.

A. Private residences: Smoking is permitted inside attached and detached private residences, except when a residence is being used for child care or as a health care facility subject to applicable licensing requirements, or where 2 or more residences share common heating or cooling systems which utilize the same ducting system which results in air from one unit being distributed to another unit. This does not preclude a person or entity that owns or controls private residential property, including but not limited to a condominium association or an apartment complex owner, from prohibiting smoking within private residences under its control.

Additional Resources

[A research paper describes a plan with the following strategies:](#)¹¹⁸

Tier One

- Community Organizing Programs for Renters
- Information and Access for Supportive Services

Tier Two:

- Classes and Counseling for Renters and Landlords
- Landlord Assistance

Tier Three:

- Code Enforcement

Chapter 10: Urban Planning and HIAs

Community planners are using Health Impact Assessments (HIA) as a tool for assisting with evaluating decisions before a project(s) is implemented. HIAs help to consider the design implications for health and are a great resource for planners/health professionals to use.

Additional Resources

Health Impact Assessment (HIA) for Planners: What Tools Are Useful?¹¹⁹

Dimension	For HIA	Against HIA
New arguments for planning	As urbanization and population growth continue in the coming century, health will only gain in public and political importance.	While HIA provides an attractive package, it may be seen as repackaging environmental impact assessment (EIA), social impact assessment, and sustainability indicators in a health wrapping.
Partners	HIA provides new allies and constituencies—providing political support and funding for planning.	The health focus potentially marginalizes planners and makes public health professionals more central.
Breadth vs depth	<p>The wide range of health issues that are relevant to planners helps them look beyond the narrow range of typical planning concerns.</p> <p>HIA casts a wider and stronger net for issues to be considered in planning applications, providing a systematic filter through which to broaden the scope of concerns.</p>	The most popular HIA process, rapid assessment, is essentially a workshop process tapping into existing knowledge. While it can be done in a way that allows participants to combine their local knowledge with technical knowledge to create a sophisticated analysis, this takes a lot of work from those preparing for the workshop and those participating in it (Kearney 2004; Kemm 2005).
Research	HIA, when properly designed and executed, taps into rigorous public health research literature and prompts planners to ask more sophisticated questions about the content and outcomes of their plans and policies.	The level of certainty in research on urban areas is low, and in many cases there are few or no studies about health effects of different plan and policy approaches. Thus, health research may provide only the appearance of increased rigor while masking very

		real uncertainties.
Social issues	A focus on social issues is particularly crucial at a time when public support for planning's traditional social equity concerns is uneven	Urban planners already conduct many assessments related to environment, fiscal concerns, livability, and sustainability. These also have the potential to raise social issues
Administration	Some forms of HIA provide a means to benchmark often discussed but rarely operationalized matters in urban planning. HIA therefore helps focus discussions around a common threshold while at the same time allowing competing viewpoints around a common point of reference.	HIA potentially adds yet more bureaucratic steps to an already cumbersome and often costly planning process.
Implementation	HIAs prepared with substantial collaboration may build a base of support for collaboration.	As with EIAs, there is no guarantee that the findings of an HIA be implemented.

Design for Health:¹²⁰

- HIA Preliminary Checklist
A checklist of health issues to see if further assessment is needed. DFH is adding to earlier examples more specific information about health-relevant thresholds and standards.
- Rapid Assessment
Based on the Merseyside model, it is a workshop-based rapid assessment. DFH is creating a toolkit for preparing materials before the event and for reporting.
- HIA Threshold Analysis
This is a more detailed spreadsheet-based assessment.
- Comprehensive Plan Review Checklists
These Plan Review Checklists summarize the key points of the Design for Health background and health impact assessment materials. Topics match the plan elements required by the Twin Cities Metropolitan Council.
- Participation and Planning for Health
How can the public participate in planning for health? Which Design for Health tools can be used in participation processes or modified for such use? This fact sheet deals with these two issues.
- Communicating about Health Impacts (80 KB)
HIA tools produce a large amount of useful information about various health topics, the location of health impacts, and who is affected by a project, plan, or policy. This fact sheet

presents practical ideas for presenting information about the HIA process and the findings of HIA studies to a variety of audiences.

- Health Impact Assessment Report, "Assessment of Open Burning Enforcement in Lacrosse County" ¹²¹

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